

中国山矾科的初步研究

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A PRELIMINARY STUDY ON SYMPLOCOS OF CHINA

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关键词 山矾科; 新分类群; 种的划分; 分布。

各国植物分类学家对山矾科 (Symplocaceae) 属的范围及属下等级的划分各异。1901 年 A. Brand^[2] 划分该科为 1 属, 4 个亚属、8 个组、3 个亚组, 记载我国有 40 种。1943 年 H. Handel-Mazzetti et E. Peter-Stibai^[3] 划分为 1 属, 2 个亚属, 5 个组, 记载我国有 68 种, 同年 H. Migo^[6] 记载我国有 40 种。1975 年 H. P. Nooteboom^[4] 划分为 1 属, 2 个亚属, 记载我国有 34 种。此外, K. Mori (1934)^[7]、李惠林 (Hui-Lin Li) (1963)^[8]、H. P. Nooteboom (1978)^[9] 等都研究了我国台湾的山矾科。这些学者的工作, 对研究中国山矾科植物奠定了良好的基础。

作者在编写《中国植物志》山矾科时, 对属内的复杂类群进行了研究, 基本上采纳了 Handel-Mazzetti et Peter-Stibai 的系统, 但对亚属和某些组作了修正, 把山矾属分为 2 个亚属, 6 个组。现将该科在我国的 2 个新组, 9 个新种 3 个新变种和某些分类群的讨论, 地理分布等作一初步介绍。

一、新分类群

组 2. 单花山矾组 新组

Sect. 2. **Singuliflorae** Y. F. Wu, sect. nov.

Sectio sect. Palaeosymplocori Brand affinis, sed floribus solitariis, calycis lobis tubo plus duplo longioribus differt.

本组与古山矾组 (Sect. Palaeosymplocos Brand) 接近, 但本组的花单生, 花萼裂片长为萼筒的二倍可以区别。

Typus sectionis (组模式): *S. ovatilobata* Noot.

组 5. 团伞组 新组

Sect. 5. **Glomeratae** Y. F. Wu, sect. nov.

Sectio sect. Bobuae (DC.) Brand affinis, sed inflorescentiis glomerulatis, fructibus cylindraceis parce subglobosis differt.

本组与球果山矾组 (Sect. Bobua (DC.) Brand) 接近, 但本组的花排成团伞花序, 核果圆柱形, 很少近球形可以区别。

Typus sectionis (组模式): *S. glomerata* King ex Clarke

1. 棱角山矾 新种 图 1

Symplocos tetragona Chen ex Y. F. Wu, sp. nov.

Species *S. setchuensi* Brand simillima, sed spicis e basi ramificantibus, c. 6 cm longis, calycis lobis rotundis, glabris, staminibus 45—50 differt.

Arbor. Ramuli flavo-virides, robusti, angulati. Folia coriacea, anguste elliptica 12—14 cm longa, 3—5 cm lata, apice acuta, basi cuneata, margine crenato-serrata, utrinque flavo-
viridia, costa media supra prominula, nervis lateralibus utrinsecus 9—14, tenuibus supra obscuris subtus prominulis, petiolis c. 1 cm longis. Spicae pubescentes; bracteae ovatae c. 3 mm longae; bracteolae ellipticae c. 3 mm latae. Calyx 4 mm longus, lobis rotundatis glabris; corolla alba (e collectore) 6 mm longa; discus glandulifer et pilosus; styli c. 3 mm longi. Fructus oblongi, 1.5 cm longi, 8 mm diam.

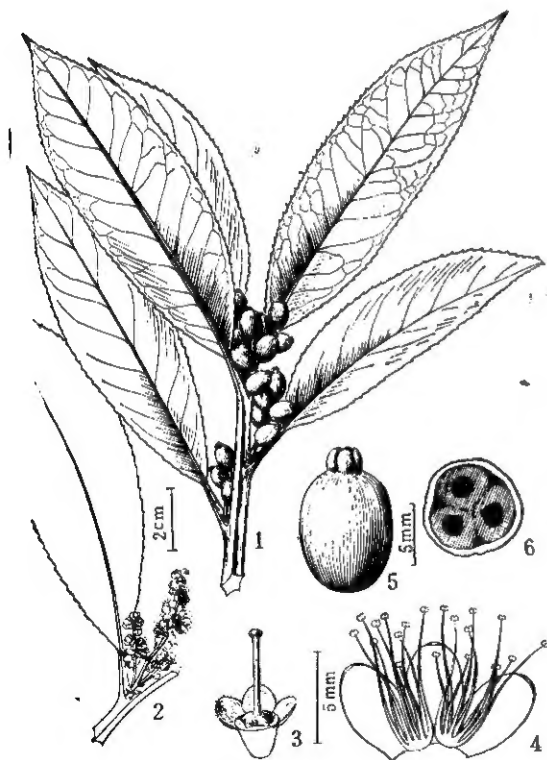


图1 棱角山矾 *Symplocos tetragona* 1.果枝 fruiting branch; 2.花枝 flowering branch; 3.花去花冠, 雄蕊示花萼、花盘和雌蕊 flower with corolla and stamens removed, showing calyx, disk and pistil; 4.花冠展开示雄蕊 corolla opened up, showing stamens; 5.果 fruit; 6.果横切面 cross-section of fruit.

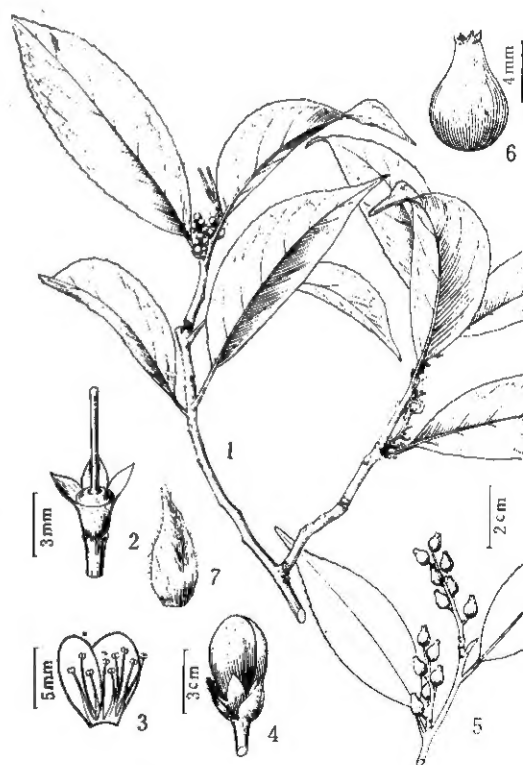


图2 卵苞山矾 *S. ovatifructa* 1.花枝 flowering branch; 2.花去花冠、雄蕊示花萼、花盘和雌蕊 flower with corolla and stamens removed, showing calyx, disk and pistil; 3.花冠展开示雄蕊 corolla opened up, showing stamens; 4.花和小苞片 flower and bracteole; 5.果枝 fruiting branch; 6.果 fruit; 7.小苞片 bracteole.

Zhejiang (浙江): Hangzhou (杭州), Hangzhou Botanic Garden (杭州植物园), in forest, Apr. 1978, Y. Y. Ho (贺贤育) 30344 (Typus, SCBI); same place, Nov. 5 1983, Y. F. Wu (吴容芬) 147. Fujian (福建): Sha Xian (沙县), P. C. Tsoong (钟补勤) 426. Jiangxi (江西): Lu Shan (庐山), alt. 1000 m, Yao Gan (姚淦) 8799. Hunan (湖南): Dao xian (道县), Lamzhong (林众) 17.

本种与四川山矾 *S. setchuensis* Brand 相似, 其区别点是本种的穗状花序基部有分枝, 长约 6cm, 花萼裂片圆形, 无毛, 雄蕊 45—50 枚, 易于区别。

2. 卵苞山矾 新种 图 2

Symplocos ovatifractea Y. F. Wu, sp. nov.

Species *S. botryanthae* Franch. simillima, sed racemis c. 2 cm longis minute puberulis; bracteolis anguste ovatis apice acuminatis, c. 3 mm longis, 1.2 mm latis; calycis lobis oblongoovatis tubo paululo longioribus deffert.

Frutex. Folia crassa coriacea, oblongo-elliptica vel elliptica vel ovata, 6—10 cm longa, 2.5—3.5 cm lata, apice caudata, basi cuneata vel late cuneata, margine crenato-serrata, costa media supra imprassa, nervis lateralibus utrinsecus 5—6, petiolis 1—1.5 cm longis. Bracteae oblongae, caducae; bracteolae villosae. Calyx c. 3 mm longus; corolla alba (e collectore) c. 7 mm longa, 5-partita, lobis oblongis, c. 6 mm longis; stamina c. 20; styli c. 6 mm longi; stigma capitatum; discus annulatus. Fructus ovoidei, c. 8mm longi.

Guangxi (广西): Lingui (临桂), alt. 1600 m, in dense forest, March 31 1953, L. H. Chun (陈立卿) 94623 (Typus, SCBI); Long Sheng (龙胜), C. T. Li (李中提) 60040, 600439; Z. Z. Chen (陈照宙) 51094, 51131; S. F. Yuan (袁淑芬) 5137, 5122, 5475; Da-miao Shan (大苗山), S. H. Chun (陈少卿) 17020, 17321; C. H. Lui (吕清华) 3641; Xingan (兴安), Z. Z. Chen (陈照宙) 51250; Guangxi Exped. (广西队) 4209. 4273.

本种与总状山矾 *S. botryantha* Franch. 相似, 其区别点是本种的总状花序长约 2cm, 被微柔毛; 小苞片狭卵形, 长约 3mm; 花萼裂片长卵形, 稍长于萼筒, 易于区别。

3. 长花柱山矾 新种 图 3

Symplocos dolichostylosa Y. F. Wu, sp. nov.

Species *S. subconnatae* Hand.-Mazz. simillima, sed stylis longioribus, 7—8 mm longis, persistentibus; foliis coriaceis, supra nervis lateralibus saepissime impressis, petiolis longioribus, 1—1.5 cm longis; racemis robustioribus, subglabris; calycibus glabris; staminibus 20; fructibus glabris differt.

Arbor 3—5m alta. Gemmae dense flavo-pubescentes; ramuli juveniores flavo-brunnei, glabri. Folia anguste elliptica vel elliptica, 7—13 cm longa, 2.3—3 cm lata, apice acuminata, basi late cuneata, utrinque glabra; costa media supra impressa, nervis lateralibus utrinsecus 5—9, tenuibus, nervulis obsoletis. Racemi 7—10 cm longi, bracteae caducae; calyx c. 3.2 mm longus, lobis ovatis tubo brevioribus; corolla 6 mm longa, 5-partita, lobis oblongis c. 5 mm longis; stamina 20, filamentis c. 6 mm longis; discus cylindricus. Fructus ovoidei, c. 1

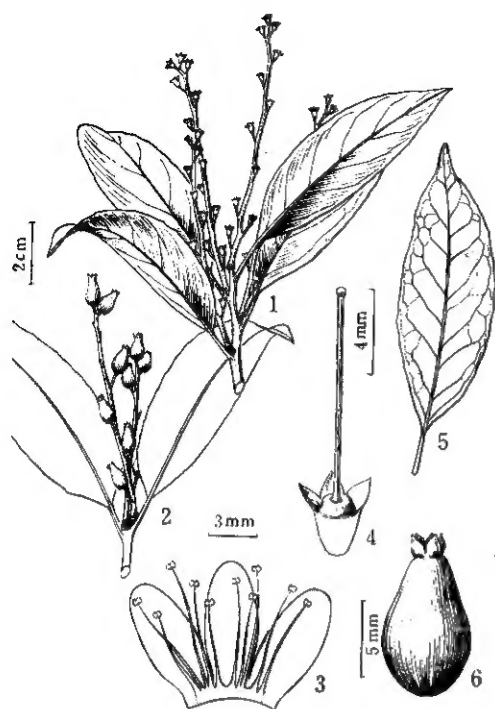


图3 长花柱山矾 *Symplocos dolichostylosa*

1.花枝 flowering branch; 2.果枝 fruiting branch; 3.花冠展开示雄蕊 corolla opened up, showing stamens; 4.花去花冠、雄蕊示花萼、花盘和雌蕊 flower with corolla and stamens removed, showing calyx, disk and pistil; 5.叶 leaf; 6.果 fruit.

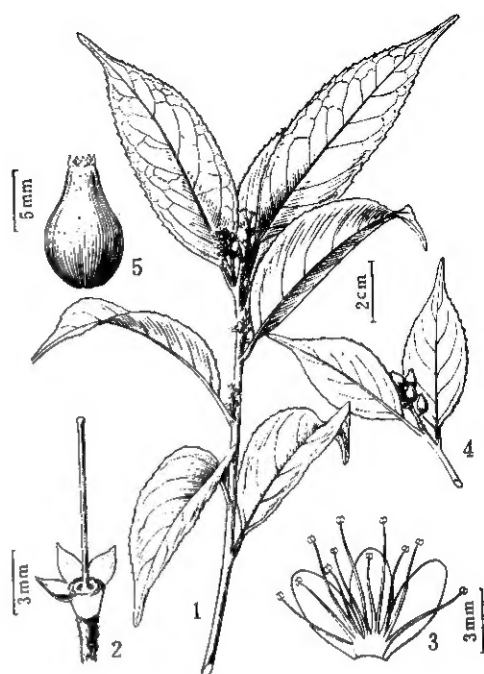


图4 毛轴山矾 *S. rachitricha* 1.花枝 flowering branch; 2.花去花冠、雄蕊示花萼、花盘和雌蕊 flower with corolla and stamens removed, showing calyx, disk and pistil; 3.花冠展开示雄蕊 corolla opened up, showing stamens; 4.果枝 fruiting branch; 5.果 fruit.

cm longi.

Hubei (湖北): Jianshi (建始), alt. 1550 m, May 13 1958, W. B. Lam (林文豹) 125 (Typus, PE). Sichuan (四川): Fengjie (奉节), M. Y. Fang (方明渊) 24922. Hunan (湖南): Longshan (龙山), L. H. Liou (刘林翰) 1781; Xinning (新宁), P. C. Tam (谭沛祥) 63519. Jiangxi (江西): Ganzhou (赣州), Dayu (大余) 761013. Guangdong (广东): Ruyuan (乳源), Y. K. Lau (刘瑛光) 391.

本种与银色山矾 *S. subconnata* Hand.-Mazz. 相似, 其区别点是本种的花柱较长, 长 7—8 mm, 宿存; 叶革质, 侧脉在叶面凹下; 叶柄较长, 长 1—1.5 cm。总状花序较粗壮, 近无毛; 花萼无毛; 雄蕊约 20 枚, 核果无毛。可以区别。

4. 毛轴山矾 新种 图4

Symplocos rachitricha Y. F. Wu, sp. nov.

Species *S. pseudobarberinae* Gontsch. simillima, sed racemis 1.5 cm longis; axibus pedicellisque dense villosis; calyce 3 mm longo, glabro, lobis oblongo-ovatis tubo paululo longioribus; staminibus c. 20; fructibus angusto-ovoides, 1.2 cm longis differt.

Frutex 4—7 m altus; ramuli tenues flavo-virides. Folia submembranacea, in sicco flavo-vir-

idia vel viridia, anguste elliptica vel elliptica, 6—10 cm longa, 2—3 cm lata, apice caudata, basi cuneata, margine serrata; costa media supra impressa, nervis lateralibus utrinsecus 4—6, petiolis 8—10 mm longis. Bracteae caducae, pedicelli c. 2 mm longi. Calycis lobi 5, glabri, striati; corolla alba (e collectore) c. 5 mm longa, 5-partita, lobis oblongis, c. 4.5 mm longis; discus annulatus, villosus.

Guangxi (广西): Lingui (临桂), alt. 1600 m, in dense forest, March 12 1955, S. F. Deng (邓先福) 265 (Typus, SCBI), flower white; Long Sheng (龙胜), C. T. Li (李中提) 70637, fruit green. Hunan (湖南): Cili (慈利), H. K. Li (李学根) 204001; Hengshan (衡山) P. C. Tsoong (钟补勤) 1389. Guizhou (贵州): Songtao (松桃) Qianbei Exped (黔北队) 1178.

本种与铁山矾 *S. pseudobarberina* Gontsch. 相似, 其区别点是本种的总状花序长约 1.5cm, 花序轴及花梗密被长柔毛; 花萼长 3mm, 无毛, 裂片长卵形, 稍长于萼筒; 雄蕊约 20 枚。核果狭卵形, 长约 1.2cm, 易于区别。

5. 倒披针叶山矾 新种 图 5



图 5 倒披针叶山矾 *Symplocos oblanceolata* 1. 果枝 fruiting branch; 2. 叶边缘放大 leaf margin, enlarged; 3. 小苞片 bracteole; 4. 苞片 bract; 5. 花去花冠、雄蕊示花萼、花盘和雌蕊基部 flower with corolla and stamens removed, showing calyx, disk and base of pistil; 6. 果 fruit.

***Symplocos oblanceolata* Y. F. Wu, sp. nov.**

Species *S. glaucae* (Thunb.) Koidz. simillima, sed foliis maioribus, 21—26 cm longis, 6—7 cm latis, margine integris, glanduliferis; nervis lateralibus supra impressis; calycibus c. 3 mm longis, tubo pubescenti, lobis subrotundatis tubo brevioribus differt.

Arbor c. 11 m alta; ramuli robusti, nigrescentes. Folia tenuiter coriacea, anguste elliptica vel oblanceolata, 21—26 cm longa, 6—7 cm lata, apice acuminata, basi late cuneata, utrinque glabra, costa media supra impressa, nervis lateralibus utrinsecus 11—13, petiolis 3—4 cm longis. Inflorescentiae spicatae satis compactae glomeratae; bracteae subrotundatae, 4 mm diam.; bracteolae obovatae, 2 mm longae; corollae ignotae; discus annulatus. Fructus anguste ovoidei, 1.5 cm longi, 6 mm lati.

Yunnan (云南): Hekou (河口), in forest, alt. 1500 m, Aug. 11 1959, W. X. Liou (刘伟心) 608 (Typus, SCBI).

本种与羊舌树 *S. glauca* (Thunb.) Koidz. 相似, 其区别点是本种的叶较大, 长 21—26 cm, 宽 6—7 cm, 全缘, 具腺体; 侧脉在叶面凹下; 花萼长约 3 mm, 萼筒被柔毛, 萼裂片近圆形, 短于萼筒, 易于区别。

6. 宿苞山矾 新种 图 6



图 6 宿苞山矾 *S. persistens* 1. 花枝 flowering branch; 2. 叶背放大 lower surface of leaf, enlarged; 3. 苞片 bract; 4. 花去花冠、雄蕊示花萼、花盘和雌蕊 flower with corolla and stamens removed, showing calyx, disk and pistil; 5. 花冠展开示雄蕊 corolla opened up, showing stamens; 6. 果 fruit.

Symplocos persistens Huang et Y. F. Wu, sp. nov.

Species *S. yunnanensis* Brand simillima, sed foliis subtus dense brunneo-tomentosis; inflorescentiis racemosis satis compactis glomeratis; bracteis ad basin fructus persistentibus deffert.

Arbor. c. 5 m alta; ramuli juveniores, inflorescentiae, petioli et folia subtus dense brunneo-tomentosa. Folia oblonga vel oblongo-ovata 12—19 cm longa, 5—8 cm lata, costa media supra impressa, nervis lateralibus utrinsecus 8—13, petiolis 0.6—1.2 cm longis. Bractee oblongae, 3 mm longae, 2 mm latae; bracteolae c. 1.8 mm longae, 0.8 mm latae. Calyx c. 2 mm longus extus pubescens, lobis anguste oblongis tubo paululo longioribus; corolla 3—4 mm longa, lobis anguste oblongis; stamina c. 30; discus annulatus albus pilosus. Fructus oblongi 0.8—0.9 cm longi dense pubescentes.

Yunnan (云南): Pingbian (屏边), alt. 1300 m, July 1953, fruit green, P. I. Mao (毛品一) 2563 (Typus, KUN), 2628, 2765, 2297, 3106; K. M. Feng (冯国楫) 4976; H. T. Tsai (蔡希陶) 55375, 61500.

本种与滇灰木 *S. yunnanensis* Brand 相似, 其区别点是本种的叶背面密被褐色绒毛; 总状花序缩短呈团伞状, 核果基部有宿存苞片, 可以区别。

7. 无量山山矾 新种 图 7**Symplocos wuliangshanensis** Huang et Y. F. Wu, sp. nov.

Ex affinitate *S. wenshanensis* Huang et Y. F. Wu, differt ramulis juvenilibus glabrescentibus, foliis integris, margine membranaceis, flavido-brunneis glandulosis, bracteis bracteisque extus puberulis, calycis lobis sub-rotundatis tubo brevioribus.

Arbor c. 7 m alta. Ramuli juveniles rubro-brunnei, glabri, in vetustate cinerascetes. Folia membranacea, elliptico-lanceolata vel anguste elliptica, 14—21 cm longa, 3.5—6.5 cm lata, apice acuminata, basi cuneata, utrinque glabra, costa media supra impressa, nervis lateralibus utrinsecus 8—14, petiolis rubro-brunneis, 1.5—2 cm longis. Inflorescentiae glomeratae. Bractee subrotundae, c. 3 mm diam., bracteolae oblongae, c. 2 mm longae. Calyx c. 3 mm longus, glaber; corollae ignotae. Fructus cylindrati, 1—1.5 cm longi, c. 5 mm diam.

Yunnan (云南): Jingdong (景东), Wuliangshan (无量山), alt. 1960 m, in dense forest, Apr. 20 1959, S. G. Xu (许溯桂) 3593 (Typus, KUN).

本种的亲缘种是文山山矾 *S. wenshanensis* Huang et Y. F. Wu 但本种的嫩枝无毛; 叶全缘, 边缘膜质化, 具黄棕色腺体; 苞片和小苞片外面被微柔毛; 花萼裂片近圆形, 短于萼筒等不同。

8. 文山山矾 新种 图 8**Symplocos wenshanensis** Huang et Y. F. Wu, sp. nov.

Ex affinitate *S. yizhangensis* Y. F. Wu, differt ramulis junioribus dense brunneo-tomentosis; foliis chartaceis, nervis lateralibus paucioribus utrinsecus 7—10, supra impressis; bracteis bracteisque extus fulvis villosis; staminibus c. 25.

Arbor c. 12 m alta. Folia lanceolata vel elliptico-lanceolata, 13—17 cm longa, 2.5—

3.5 cm lata, apice acuminata, basi cuneata vel late cuneata, margine serrata, utrinque glabra, costa media supra impressa, petiolis 1.5—2 cm longis. Inflorescentiae glomeratae; bracteae obovatae c. 3.2 mm longae, 2 mm latae, bracteolae ellipticae c. 2.5 mm longae, 1 mm latae. Calyx c. 4 mm longus, lobis oblongo-ovatis tubo longioribus; corolla c. 5 mm longa, 5-partita, lobis oblongis, c. 4.5 mm longis; discus annulatus villosus. Fructus ignoti.

Yunnan (云南): Wenshan (文山), alt. 2100 m, in dense forest, Sep. 25 1958, H. T. Tsai (蔡希陶) 58-8116 (Typus, KUN).

本种与宜章山矾 *S. yizhangensis* Y. F. Wu 近缘, 但本种的嫩枝密被棕色绒毛; 叶纸质, 侧脉较少, 每边 7—10 条, 在叶面凹下; 苞片和小苞片外面被黄褐色长柔毛; 雄蕊约 25 枚等不同。

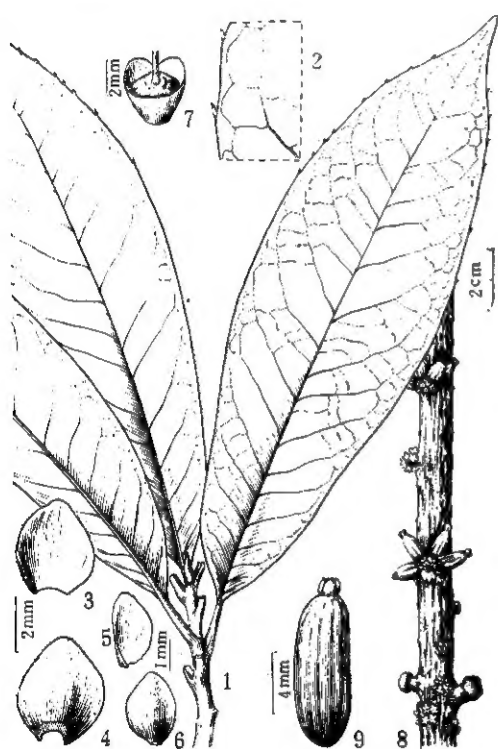


图7 无量山山矾 *Symplocos wuliangshanensis* 1. 小枝 shoot; 2. 叶边缘放大示腺体 leaf margin, enlarged showing glands; 3. 苞片腹面 ventral view of bract; 4. 苞片背面 dorsal view of bract; 5. 小苞片腹面 ventral view of bracteole; 6. 小苞片背面 dorsal view of bracteole; 7. 花去花冠、雄蕊示花萼、花盘和雌蕊 flower with corolla and stamens removed, showing calyx, disk and pistil; 8. 果枝 fruiting branch; 9. 果 fruit.

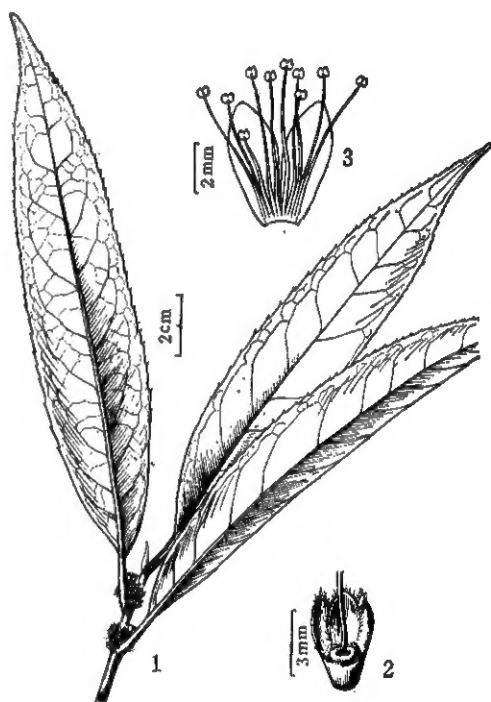


图8 文山山矾 *S. wenshanensis* 1. 花枝 flowering branch; 2. 花去花冠、雄蕊示花萼、花盘和雌蕊 flower with corolla and stamens removed, showing calyx disk and base of pistil; 3. 花冠展开示雄蕊 corolla opened up, showing stamens.

9. 宜章山矾 新种 图9

Symplocos yizhangensis Y. F. Wu, sp. nov.

Species *S. glomeratae* King simillima, sed ramulis junioribus flavo-brunneis; foliis subco-

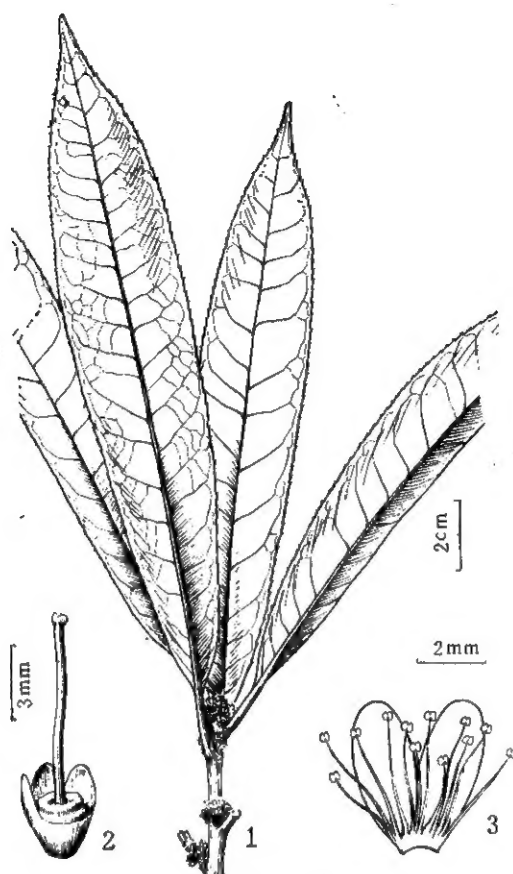


图9 宜章山矾 *Symplocos yizhangensis* 1.花枝 flowering branch; 2.花去花冠、雄蕊, 示花萼、花盘和雌蕊 flower with corolla and stamens removed, showing calyx, disk and pistil; 3. 花冠展开示雄蕊 corolla opened up, showing stamens. (本文用图余峰绘)

riaceis, nervis lateralibus pluribus utrinsecus 15—17, petiolis 2—2.5 cm longis haud glanduloso-dentatis; bracteis bracteolisque extus puberulis; calycis tubo extus haud glanduloso-punctato, lobis oblongis extus puberulis tubo longioribus; staminibus c. 30 differt.

Arbor 3—4 m alta; ramuli glabri. Folia lanceolata vel anguste elliptica 14—19 cm longa, 2.5—5 cm lata, apice acuminata, basi cuneata vel late cuneata, margine serrata, utrinque glabra, nervis lateralibus supra impressis. Inflorescentiae glomeratae; bractae ovato-rotundae c. 3.2 mm longae, 3 mm latae; bracteolae ovato-deltoidae, apice acutae c. 2 mm longae, 1.2 mm latae. Calyx c. 4 mm longus, tubo glabro; corolla 4—5 mm longa, 5-partita, lobis oblongis, 3.5—4.5 longis; discus crateriformis, glaber. Fructus cylindrati c. 7 mm longi.

Hunan (湖南): Yizhang (宜章), alt. 1240 m, in dense forest, flower White, August 13 1964, M.S. Huang (黄茂先) 112018 (Typus, SCBI), 111884. 11529; P. H. Liang (梁宝汉) 83821, 83764; S. H. Chun (陈少卿) 2757. Jiangxi (江西): Jinggang Shan (井冈山), For. Dept. Com. Univ. (共大林学系) 740279. Guangdong (广东): Ruyuan

(乳源), L. Deng (邓良) 5813; S. C. Lee (李学根) 201313; C. Wang (黄志) 44340. Zhejiang (浙江): Hangzhou (杭州), C. C. Cheng and C. F. Chang (郑朝宗、张朝方) 7958.

本种与团花山矾 *S. glomerata* King 相似, 但本种的嫩枝黄褐色, 叶近革质, 侧脉较多, 每边 15—17 条, 叶柄长 2—2.5cm, 无腺齿; 苞片和小苞片外面有微柔毛; 花萼筒外面无腺点, 花萼裂片长圆形, 外面有微柔毛, 稍长于萼筒, 雄蕊约 30 枚等不同。

10. 绒毛滇南山矾 新变种

***Symplocos hookeri* Clarke var. *tomentosa* Y. F. Wu, var. nov.**

A varietate *hookeri* differt ramulis junioribus, infructescentiis, petiolis et foliis subtus ad nervulos dense brunneo-tomentosis, fructibus junioribus pubescentibus.

Yunnan (云南): Jinping (金平), in forest, alt. 1500 m, August 21 1951, P. 1. Mao (毛品一) 447 (Typus, KUN)。

本变种与滇南山矾(原变种)不同之处在于嫩枝、果序、叶柄, 叶背脉上均被褐色绒毛, 核果被柔毛。

11. 微毛越南山矾 新变种

***Symplocos cochinchinensis* (Lour.) Moore var. *puberula* Huang et Y. F. Wu, var. nov.**

A varietate *cochinchinensi* differt ramulis et foliis subtus ad nervulos minute puberulis。

Yunnan (云南): Mengzhe (勐遮), alt. 1100 m, June 1936, C. W. Wang (王启无) 76996 (Typus, KUN)。

本变种与越南山矾(原变种)不同之处在于小枝和叶背面脉上有微柔毛。

12. 被毛腺柄山矾 新变种

***Symplocos adenopus* Hance var. *vestita* Huang et Y. F. Wu, var. nov.**

A varietate *adenopo* differt foliis subtus villosis et brunneo-glandulosis。

Yunnan (云南): Xichou (西畴), in forest, alt. 1500 m, Sep. 18 1947, K. M. Feng (冯国楦) 11884 (Typus, KUN)。

新变种不同于原变种, 在于叶背面具长柔毛和褐色腺体。

(待续 to be cont.)